

## Abstract

An active flow control device and method are disclosed for improving the aerodynamic efficiency of airfoils. The device and method pertain to the application of hybrid  
5 intermittent suction or intake of low-energy boundary layer fluid into an airfoil through one or more inlet openings while also applying intermittent blowing or expulsion of fluid out of such an airfoil into the boundary layer through one or more outlet openings for the purpose of delaying or eliminating  
10 boundary layer separation.